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RESEARCH ARTICLE

MULTIPLE BRACHIAL PLEXUS SCHWANNOMAS - A RARE CASE

Dr. Vinayak Hadke

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Key words:-
Brachial Plexus, Schwannoma, Nerve Sheath Tumor

Abstract

Background: Schwannoma is a benign encapsulated nerve sheath tumour that arises from the Schwann cells along the course of a nerve and can affect the third to 12th cranial nerves, peripheral and autonomic nerves. Schwannoma was first described by Verocay in 1908. Schwannoma rarely affects brachial plexus, accounting for 5% of all cases of schwannoma.

Case: 38year old female patient presented with a left axillary mass noticed since 1 year. The mass was slowly increasing in size and was painful associated with tingling and numbness over medial aspect of left arm, forearm and hand. MRI was Suggestive of multiple, well defined, round to oval altered signal intensity lesions noted in infraclavicular region of axilla and upper arm on left side along the course of neurovascular bundles. On exploration left brachial plexus through left axillary approach , total of 11 nerve sheath tumours noted and dissected from territory of medial brachial cutaneous nerve and intercostobrachial nerve of the left arm. Histopathology report was suggestive of left axillary schwannoma with no evidence of malignancy.

Conclusion: Schwannoma' s around neck and axilla region are uncommon lesions arising from peripheral nerves and should be considered as one of the differential while evaluation.

Introduction:-

Schwannoma, also known as Neurilemmoma is a benign encapsulated nerve sheath tumour that arises from the Schwann cells along the course of a nerve and can affect the third to twelth cranial nerves, peripheral and autonomic nerves.[1-4] Schwannoma was first described by Verocay in 1908[5,6]. Schwannoma rarely affects brachial plexus, accounting for 5% of all cases of schwannoma[7,8].

Secondary to its rarity, many cases can be missed, and it should be kept in mind as a differential diagnosis of axillary lymphadenopathy[9].

Case Report We present a case of a 38 year old female patient presented to our clinic,with a right axillary swellings which was noted first, one year before presentation.The mass was slowly increasing in size and was painful. With increase in size of a swelling she complained of tingling and numbness over medial aspect of left arm forearm and hand. There was no history of trauma, night sweats, fever,chills and any other systemic illness. There was no history of weakness, numbness or loss of function of left upper limb.There was no history of similar complains in family in past.

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On examination overlying skin of left axilla normal. There were multiple palpable axillary swellings tender, firm, mobile. About four palpable axillary swellings of maximum size 3cm by 3cm and about two swelling palpable over medial aspect of left arm maximum size 2cm by 2cm noted.There was no palpable swelling in left breast and right side axilla.Muscle power of all muscles is 5/5.

Ultrasound –Multiple (7 to 8) well defined isoechoic to hypoechoic lesions located in posterior aspect of left arm and axilla in intramuscular plane finding suggestive of benign etiology lesion intramuscular myxoma or peripheral nerve sheath lesion.

Fine needle aspiration cytology suggestive of mesenchymal tumor.

Then MRI was performed to define tumor location and size to delineat tumour margins and relationship to adjascent structures.Suggestive of multiple well defined round to oval altered signal intensity lesions noted in infraclavicular region of axilla and upper arm on left side along the course of neurovascular bundles.Swelling appears iso intense to hypo intense on T1 W images nad heterogeneously hyper intense on T2W images and T2DIXON images with central low signal and peripheral hyperintensity on T2W1 giving target and fascicular sign. On post contrast study lesions show heterogenous contrast enhancement. Above features suggestive of nerve sheath tumour.

She underwent exploration of the tumour with exploration of left brachial plexus at axilla and upper arm. Intraoperative findings shows multiple well defined swelling over medial aspect of median nerve compressing median nerve. Multiple swellings extending in to axilla dissected with blunt dissection. Total about 11 nerve sheath tumors dissected from medial brachial cutaneous nerve and intercostobrachial nerve territory of left arm. Largest tumor was measuring about 4cm by 3cm.All were well encapsulated. Intraoperative nerve stimulation done and musculocutaneous and median nerve preserved. Lesions were mostly arising from sensory nerves which were dessectd and preserved.

The specimen sent for Histopathlogy which confirmed left axillary schwannoma with no evidence of malignancy.

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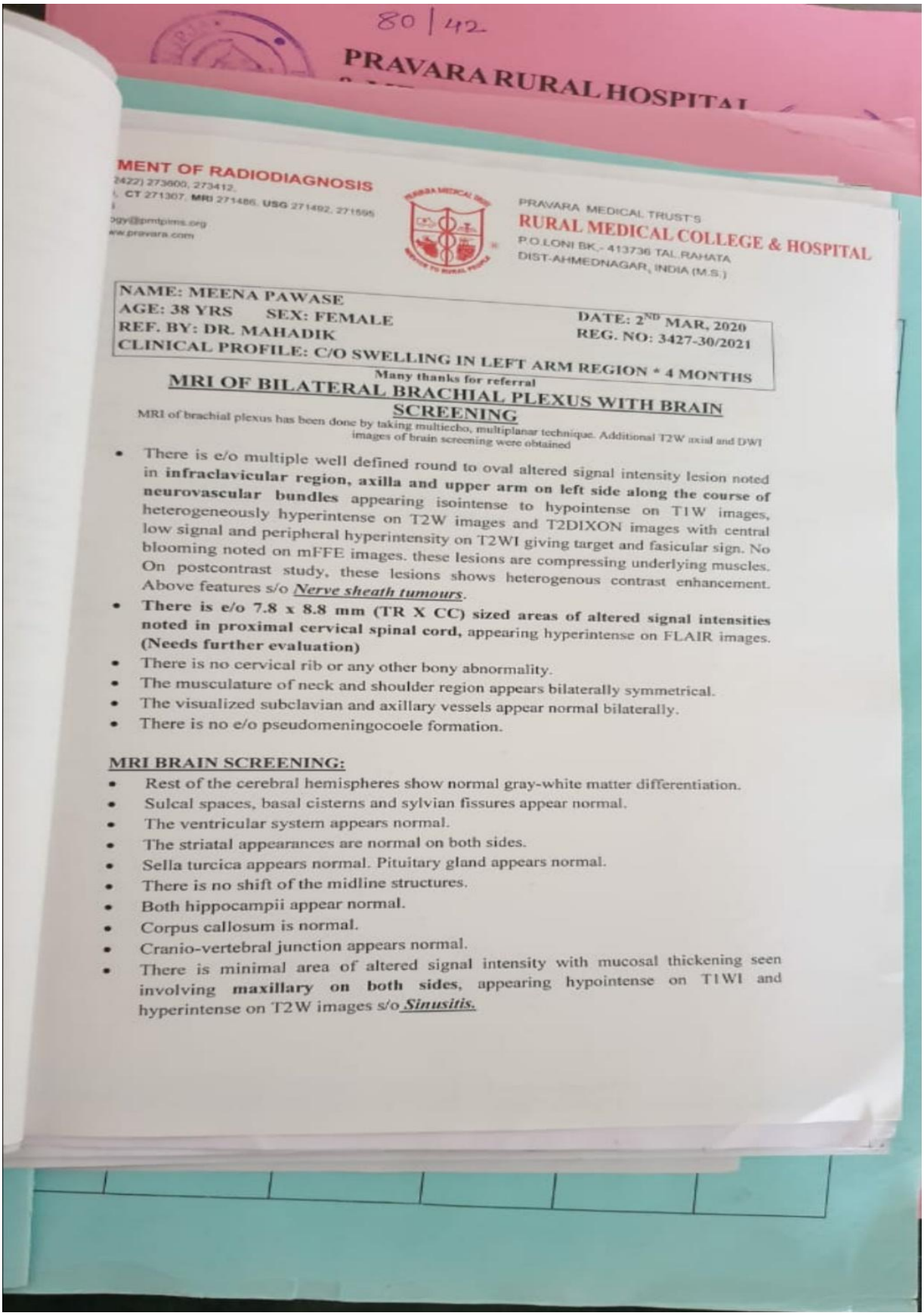

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DIST-AHMEDNAGAR, INDIA (M.S.)

NAME: MEENA PAWASE
AGE: 38 YRS SEX: FEMALE DATE: 2ND MAR, 2020
REF. BY: DR. MAHADIK REG. NO: 3427-30/2021
CLINICAL PROFILE: C/O SWELLING IN LEFT ARM REGION * 4 MONTHS

Many thanks for referral

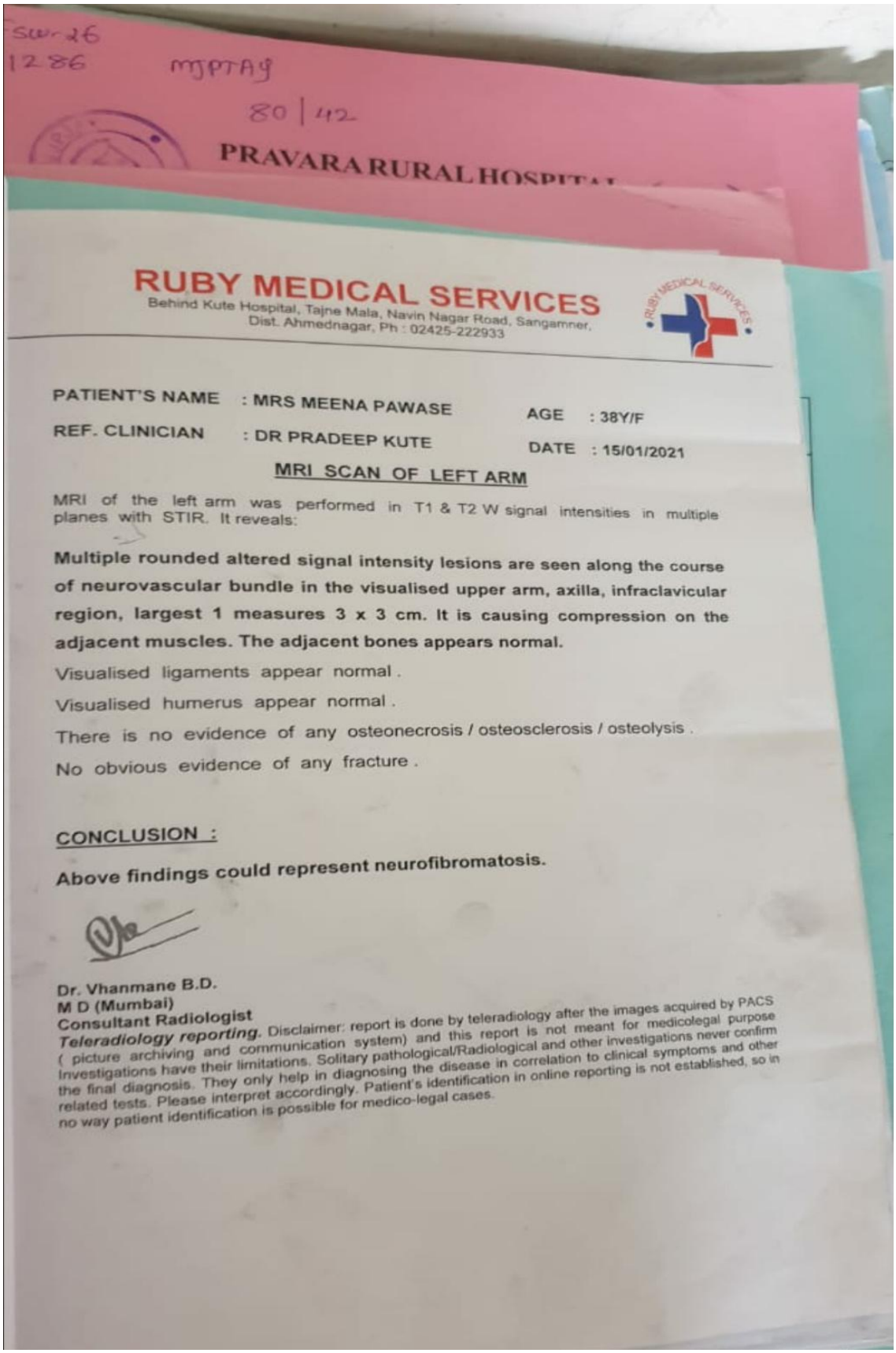
MRI OF BILATERAL BRACHIAL PLEXUS WITH BRAIN SCREENING

MRI of brachial plexus has been done by taking multiecho, multiplanar technique. Additional T2W axial and DWI images of brain screening were obtained

- There is e/o multiple well defined round to oval altered signal intensity lesion noted in **infraclavicular region, axilla and upper arm on left side along the course of neurovascular bundles** appearing isointense to hypointense on T1W images, heterogeneously hyperintense on T2W images and T2DIXON images with central low signal and peripheral hyperintensity on T2WI giving target and fasicular sign. No blooming noted on mFFE images. these lesions are compressing underlying muscles. On postcontrast study, these lesions shows heterogenous contrast enhancement. Above features s/o ***Nerve sheath tumours***.
- **There is e/o 7.8 x 8.8 mm (TR X CC) sized areas of altered signal intensities noted in proximal cervical spinal cord,** appearing hyperintense on FLAIR images. **(Needs further evaluation)**
- There is no cervical rib or any other bony abnormality.
- The musculature of neck and shoulder region appears bilaterally symmetrical.
- The visualized subclavian and axillary vessels appear normal bilaterally.
- There is no e/o pseudomeningocoele formation.

MRI BRAIN SCREENING:

- Rest of the cerebral hemispheres show normal gray-white matter differentiation.
- Sulcal spaces, basal cisterns and sylvian fissures appear normal.
- The ventricular system appears normal.
- The striatal appearances are normal on both sides.
- Sella turcica appears normal. Pituitary gland appears normal.
- There is no shift of the midline structures.
- Both hippocampii appear normal.
- Corpus callosum is normal.
- Cranio-vertebral junction appears normal.
- There is minimal area of altered signal intensity with mucosal thickening seen involving **maxillary on both sides**, appearing hypointense on T1WI and hyperintense on T2W images s/o ***Sinusitis.***



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RUBY MEDICAL SERVICES
Behind Kute Hospital, Tajne Mala, Navin Nagar Road, Sangamner,
Dist. Ahmednagar, Ph : 02425-222933

PATIENT'S NAME : MRS MEENA PAWASE **AGE** : 38Y/F

REF. CLINICIAN : DR PRADEEP KUTE **DATE** : 15/01/2021

MRI SCAN OF LEFT ARM

MRI of the left arm was performed in T1 & T2 W signal intensities in multiple planes with STIR. It reveals:

Multiple rounded altered signal intensity lesions are seen along the course of neurovascular bundle in the visualised upper arm, axilla, infraclavicular region, largest 1 measures 3 x 3 cm. It is causing compression on the adjacent muscles. The adjacent bones appears normal.

Visualised ligaments appear normal .

Visualised humerus appear normal .

There is no evidence of any osteonecrosis / osteosclerosis / osteolysis .

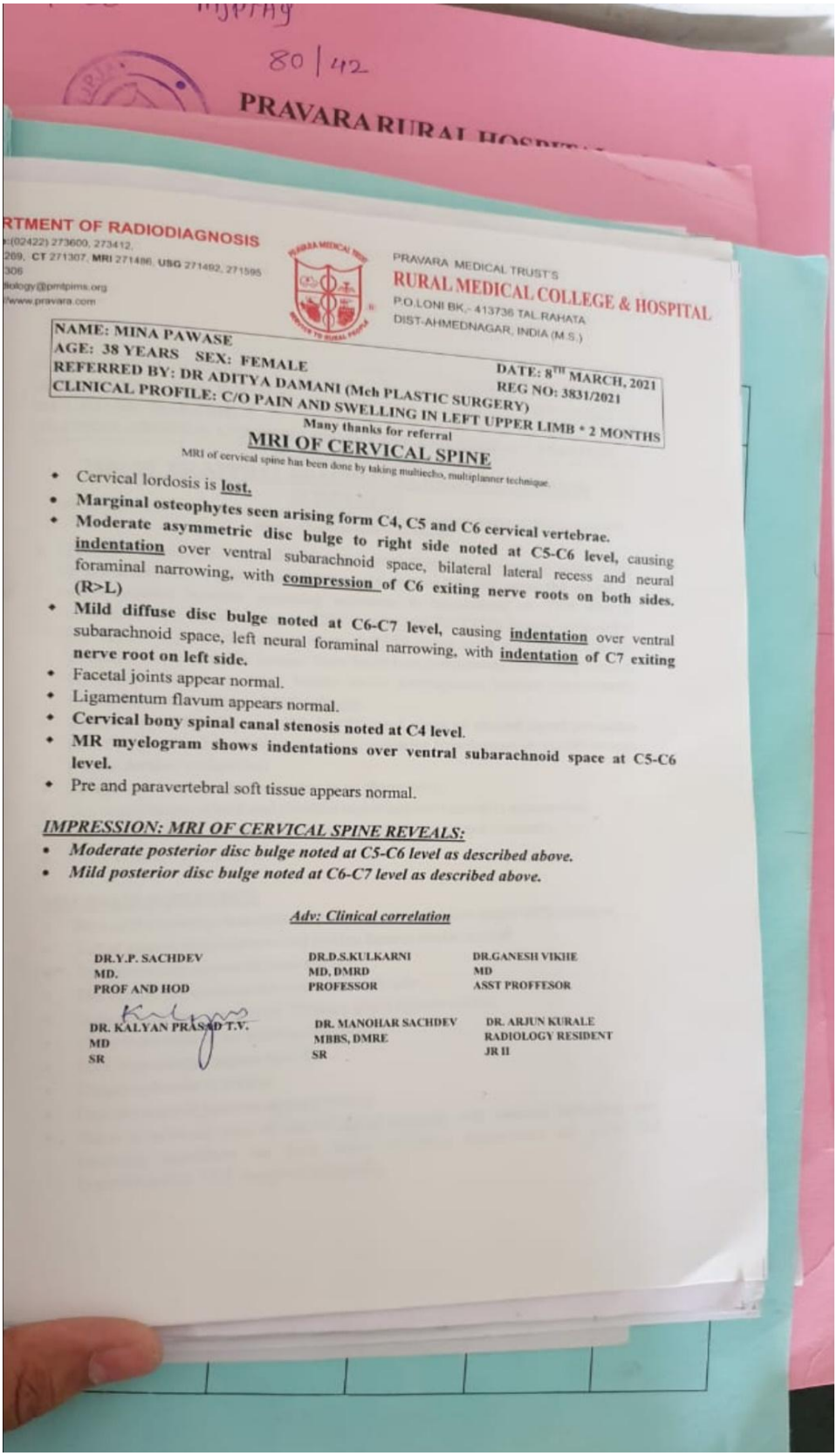
No obvious evidence of any fracture .

CONCLUSION :

Above findings could represent neurofibromatosis.

Dr. Vhanmane B.D.
M D (Mumbai)
Consultant Radiologist

Teleradiology reporting. Disclaimer: report is done by teleradiology after the images acquired by PACS (picture archiving and communication system) and this report is not meant for medicolegal purpose Investigations have their limitations. Solitary pathological/Radiological and other investigations never confirm the final diagnosis. They only help in diagnosing the disease in correlation to clinical symptoms and other related tests. Please interpret accordingly. Patient's identification in online reporting is not established, so in no way patient identification is possible for medico-legal cases.



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DIST-AHMEDNAGAR, INDIA (M.S.)

NAME: MINA PAWASE
AGE: 38 YEARS SEX: FEMALE
REFERRED BY: DR ADITYA DAMANI (Mch PLASTIC SURGERY)
CLINICAL PROFILE: C/O PAIN AND SWELLING IN LEFT UPPER LIMB * 2 MONTHS

DATE: 8TH MARCH, 2021
REG NO: 3831/2021

Many thanks for referral

MRI OF CERVICAL SPINE

MRI of cervical spine has been done by taking multiecho, multiplanner technique.

- Cervical lordosis is **lost.**
- **Marginal osteophytes seen arising form C4, C5 and C6 cervical vertebrae.**
- **Moderate asymmetric disc bulge to right side noted at C5-C6 level,** causing **indentation** over ventral subarachnoid space, bilateral lateral recess and neural foraminal narrowing, with **compression of C6 exiting nerve roots on both sides. (R>L)**
- **Mild diffuse disc bulge noted at C6-C7 level,** causing **indentation** over ventral subarachnoid space, left neural foraminal narrowing, with **indentation of C7 exiting nerve root on left side.**
- Facetal joints appear normal.
- Ligamentum flavum appears normal.
- **Cervical bony spinal canal stenosis noted at C4 level.**
- **MR myelogram shows indentations over ventral subarachnoid space at C5-C6 level.**
- Pre and paravertebral soft tissue appears normal.

IMPRESSION: MRI OF CERVICAL SPINE REVEALS:

- ***Moderate posterior disc bulge noted at C5-C6 level as described above.***
- ***Mild posterior disc bulge noted at C6-C7 level as described above.***

Adv: Clinical correlation

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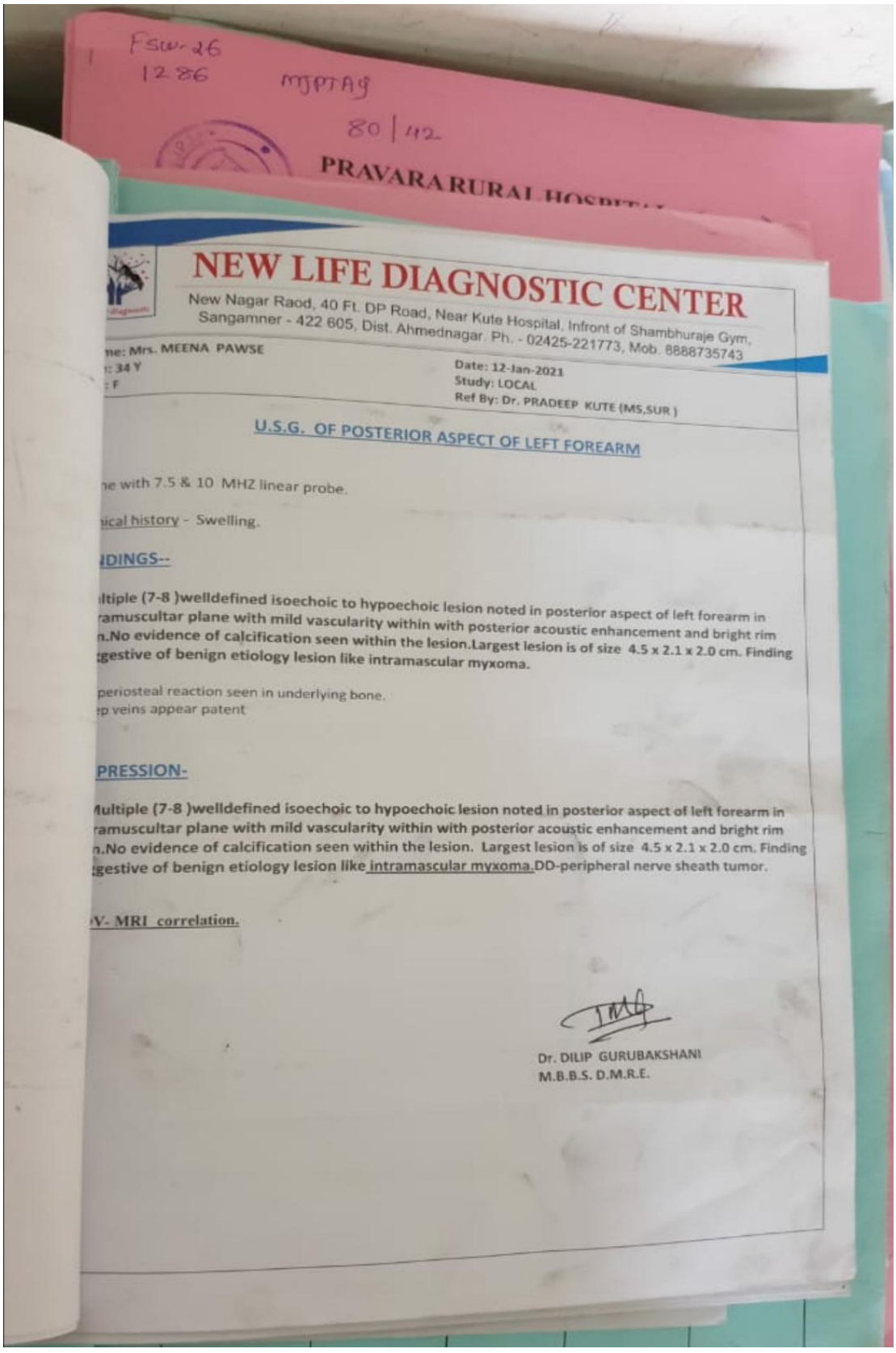

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ne: Mrs. MEENA PAWSE
: 34 Y
: F
Date: 12-Jan-2021
Study: LOCAL
Ref By: Dr. PRADEEP KUTE (MS,SUR)

U.S.G. OF POSTERIOR ASPECT OF LEFT FOREARM

ne with 7.5 & 10 MHZ linear probe.

ical history - Swelling.

NDINGS--

ltiple (7-8)welldefined isoechoic to hypoechoic lesion noted in posterior aspect of left forearm in ramuscultar plane with mild vascularity within with posterior acoustic enhancement and bright rim n.No evidence of calcification seen within the lesion.Largest lesion is of size 4.5 x 2.1 x 2.0 cm. Finding gestive of benign etiology lesion like intramascular myxoma.

periosteal reaction seen in underlying bone.
p veins appear patent

PRESSION-

Multiple (7-8)welldefined isoechoic to hypoechoic lesion noted in posterior aspect of left forearm in ramuscultar plane with mild vascularity within with posterior acoustic enhancement and bright rim n.No evidence of calcification seen within the lesion. Largest lesion is of size 4.5 x 2.1 x 2.0 cm. Finding gestive of benign etiology lesion like intramascular myxoma.DD-peripheral nerve sheath tumor.

V- MRI correlation.

Dr. DILIP GURUBAKSHANI
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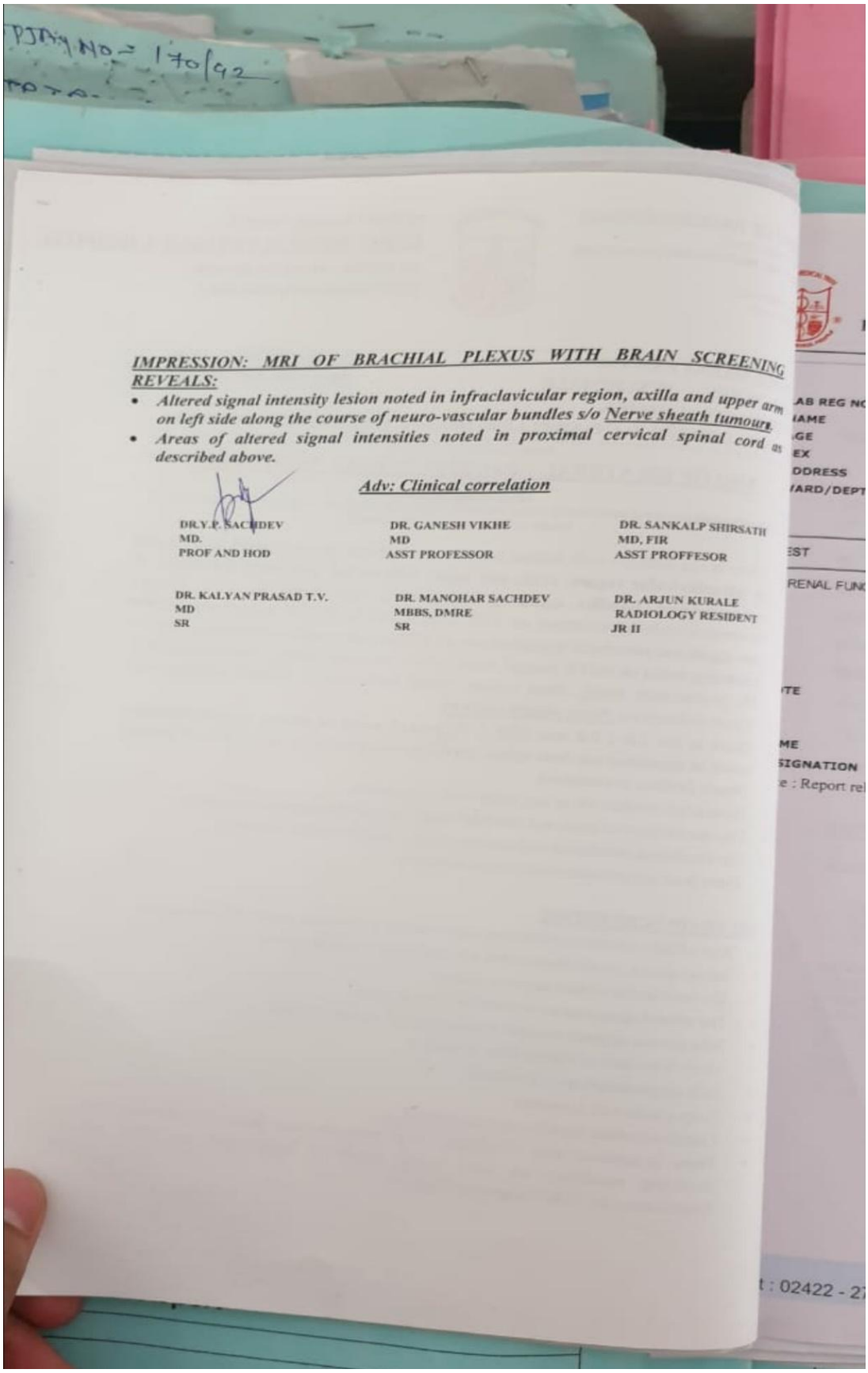

IMPRESSION: MRI OF BRACHIAL PLEXUS WITH BRAIN SCREENING REVEALS:

- *Altered signal intensity lesion noted in infraclavicular region, axilla and upper arm on left side along the course of neuro-vascular bundles s/o Nerve sheath tumours.*
- *Areas of altered signal intensities noted in proximal cervical spinal cord as described above.*

Adv: Clinical correlation

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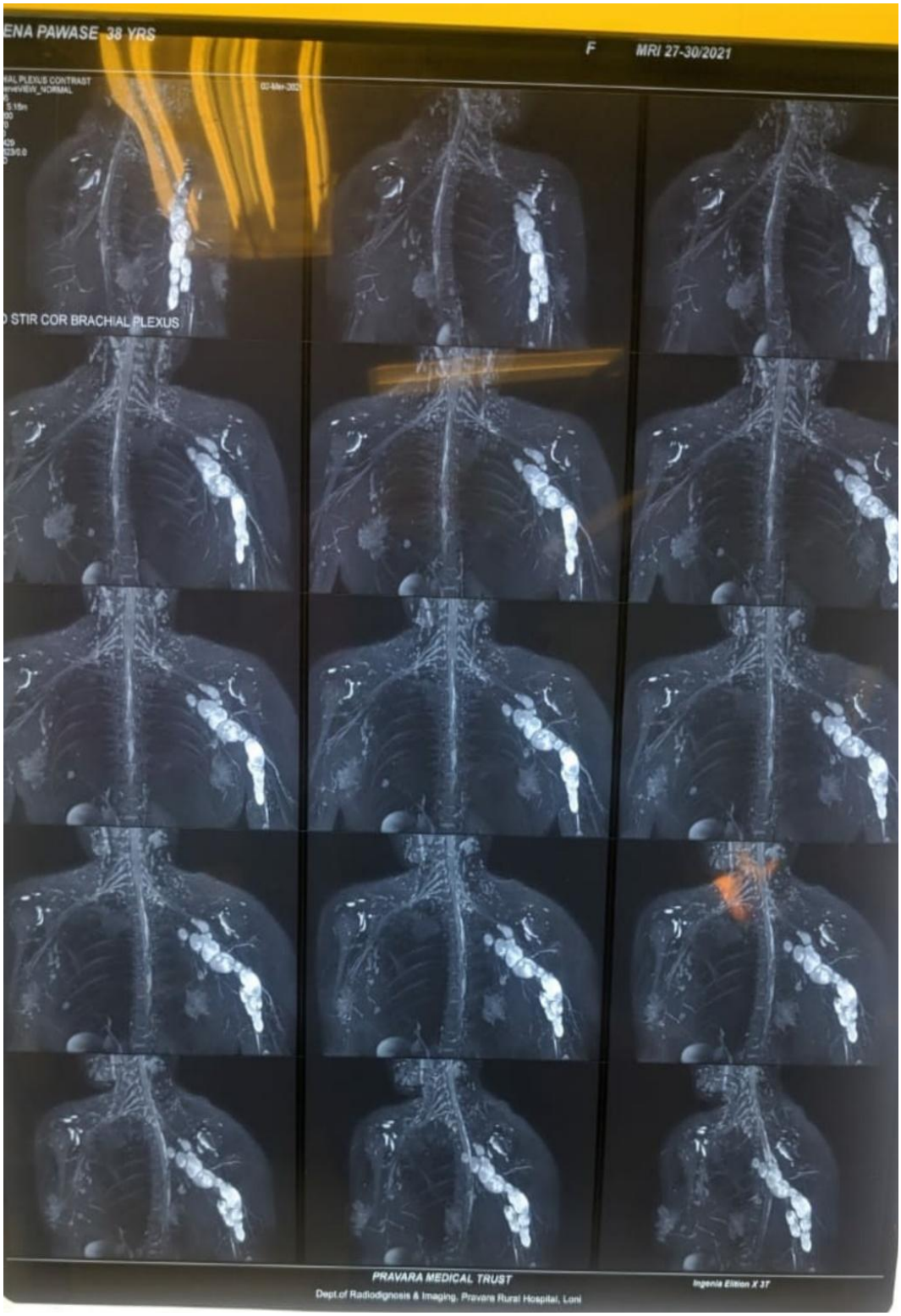
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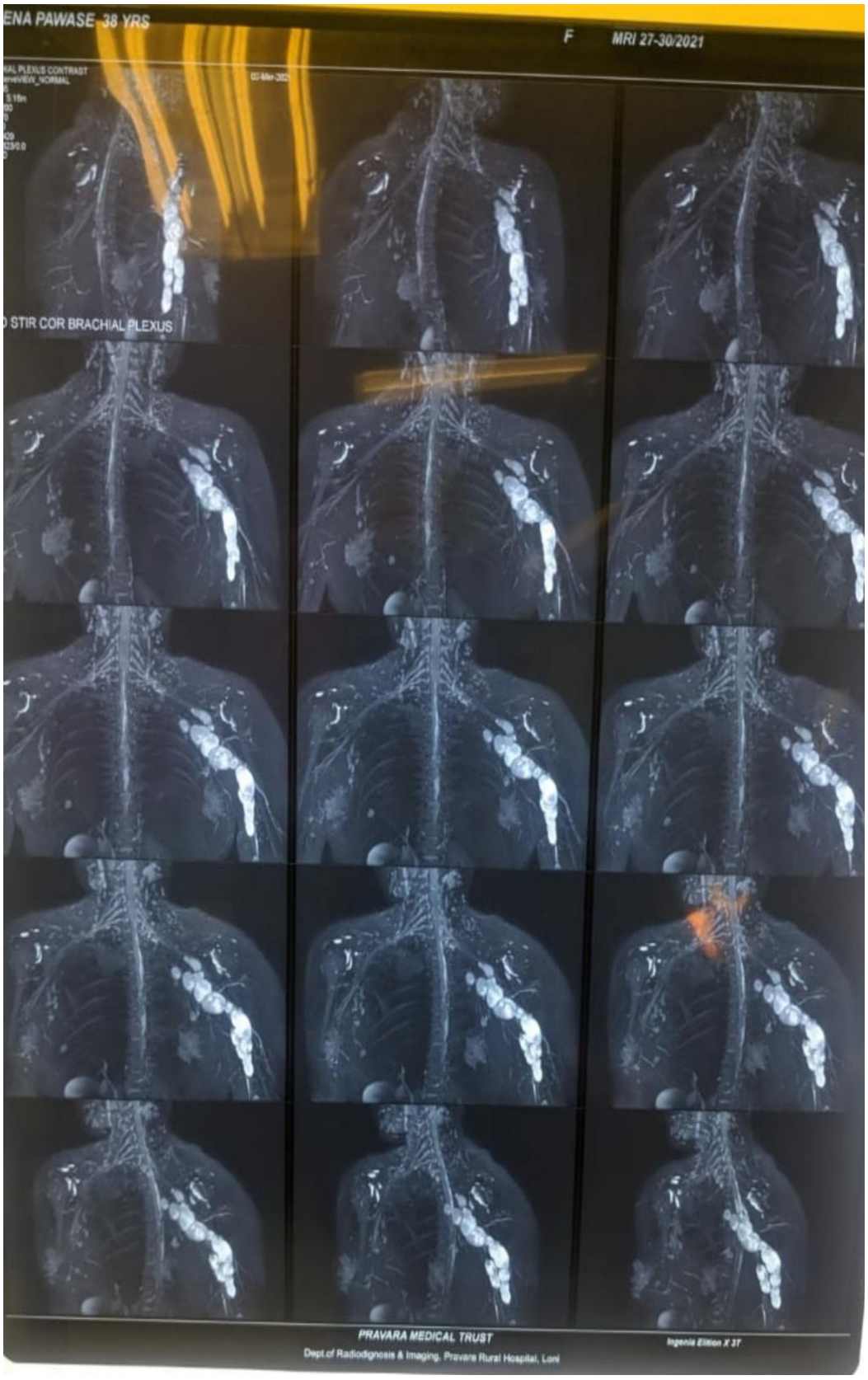
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